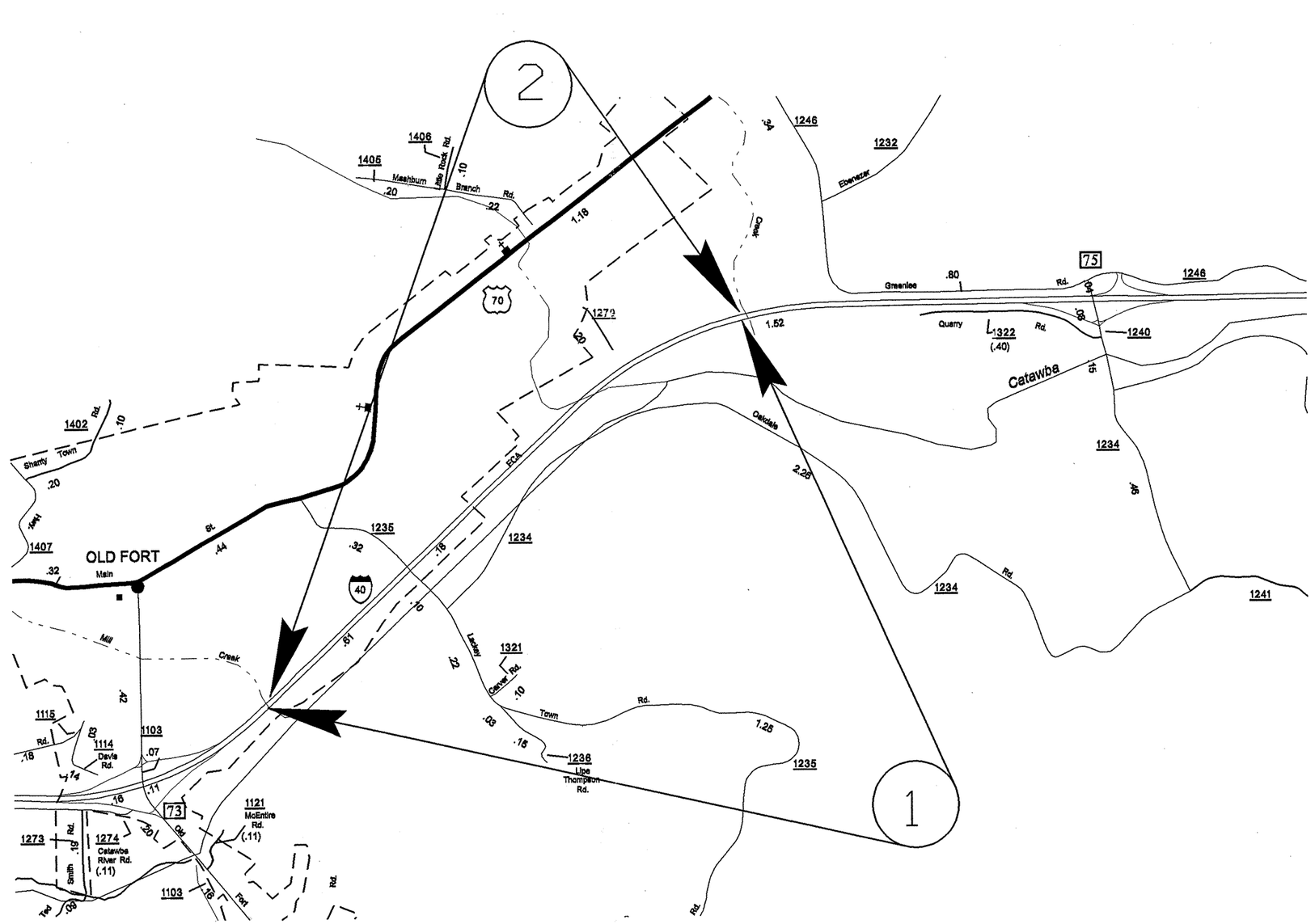
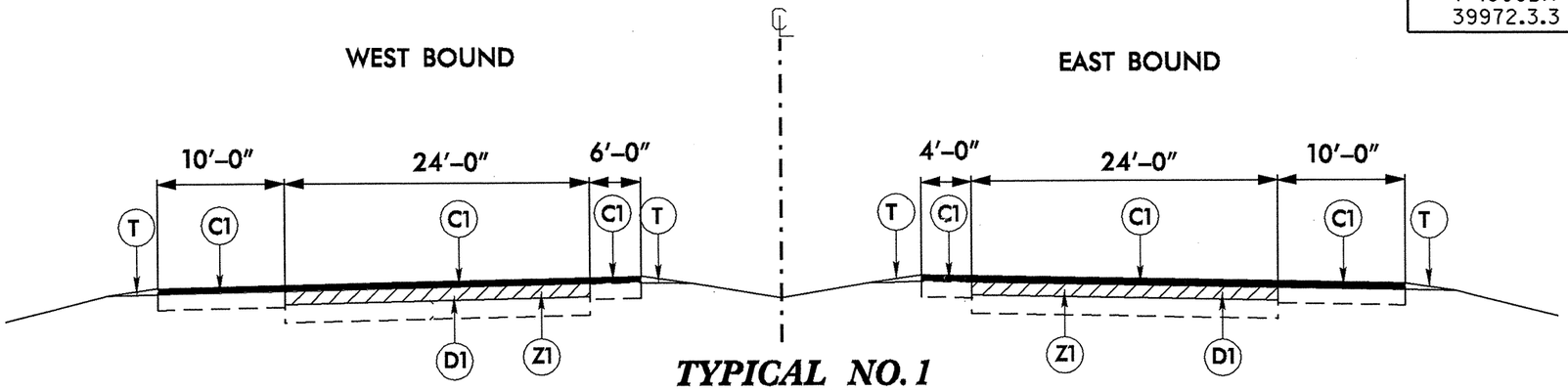
PROJECT NO.	SHEET NO.	TOTAL SHEETS
I-4908BA 39972.3.3	1	5

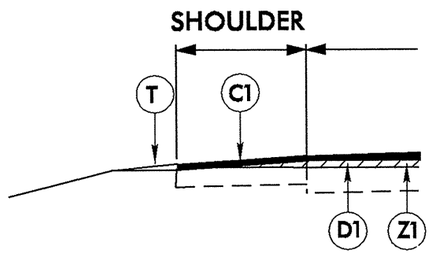


MCDOWELL COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
I-4908BA 39972.3.3	2	5

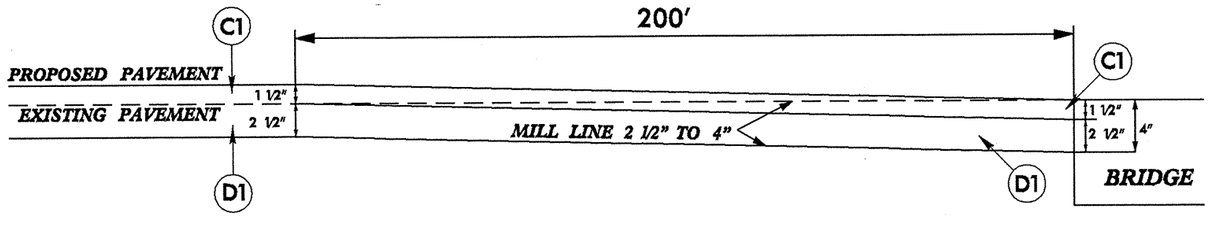


TYPICAL NO. 1



SHOULDER MILLING AND PAVING DETAIL

MILL 0 TO 2 1/2"



BRIDGE APPROACH MILLING DETAIL

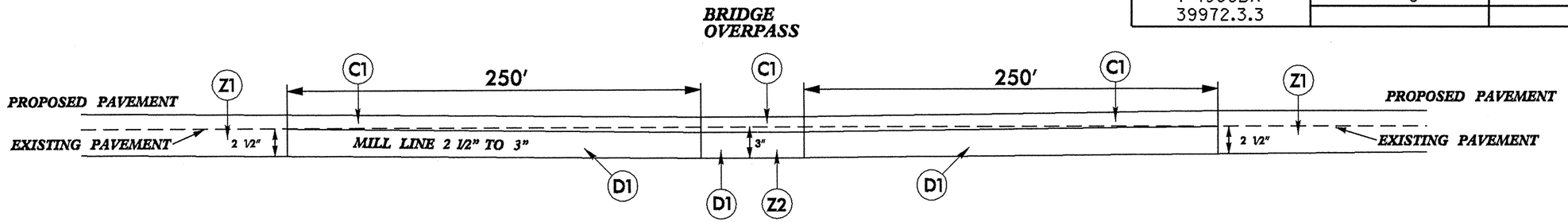
MILL 2 1/2" TO 4"

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1-1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2-1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
T	EARTH MATERIAL
Z1	MILL 2½" OVER ENTIRE ROADWAY WIDTH
Z2	MILL 3" UNDER BRIDGE OVERPASS LOCATIONS AS DIRECTED BY THE ENGINEER

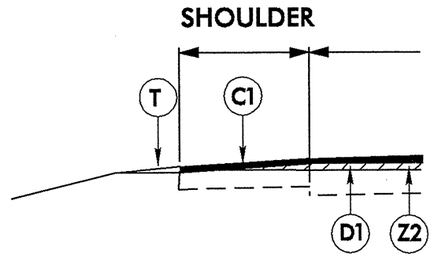
MCDOWELL COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
I-4908BA 39972.3.3	3	5



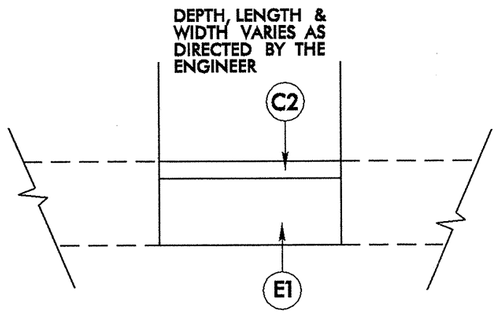
BRIDGE OVERPASS MILLING DETAIL

MILL 2 1/2" TO 3"



SHOULDER MILLING AND PAVING DETAIL BRIDGE OVERPASS

MILL 0 TO 3"



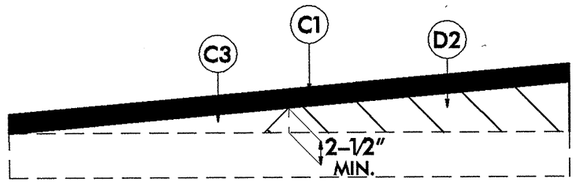
PATCHING DETAIL

FULL DEPTH PATCHING

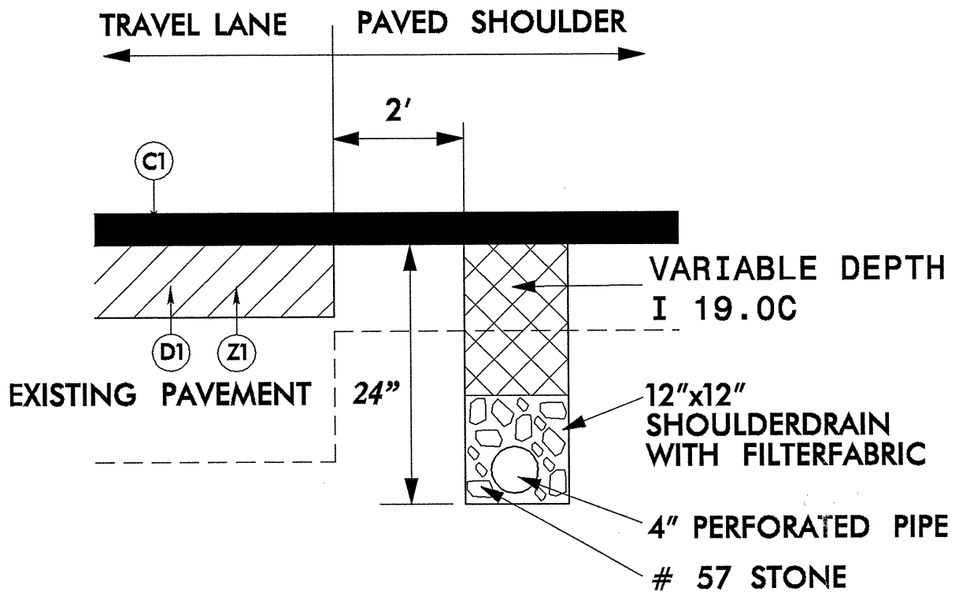
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1-1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2-1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
T	EARTH MATERIAL
Z1	MILL 2½" OVER ENTIRE ROADWAY WIDTH
Z2	MILL 3" UNDER BRIDGE OVERPASS LOCATIONS AS DIRECTED BY THE ENGINEER

MCDOWELL COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
I-4908BA 39972.3.3	4	5



WEDGING DETAIL FOR RESURFACING



SHOULDER DRAIN DETAIL

TO BE USED AS DIRECTED BY ENGINEER
PROVIDE OUTLET TO DRAINAGE STRUCTURE
OR DAYLIGHT EVERY 300'

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1-1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2-1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
T	EARTH MATERIAL
Z1	MILL 2½" OVER ENTIRE ROADWAY WIDTH
Z2	MILL 3" UNDER BRIDGE OVERPASS LOCATIONS AS DIRECTED BY THE ENGINEER

MCDOWELL COUNTY

PROJECT NO.	SHEET NO.	TOTAL NO.
I-4908BA	5	5
39972.3.3		

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH MI	WIDTH FT	SHOULDER RECONSTRUCTION SMI	2-1/2" MILLING SY	INTERMEDIATE COURSE, I19.0C TONS	SURFACE COURSE, S9.5C TONS	PG 64-22 PLANT MIX TONS	PG 70-22 PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	MILLED RUMBLE STRIPS LF	SHOULDER DRAIN LF	4" SHOULDER DRAIN PIPE LF	4" OUTLET PIPE FOR SHLDER. DRAINS LF	CONC. PAD FOR SHLDER. DRAIN OUTLET EA
39972.3.2	McDowell	1	I-40 EB	MP 73 TO MP 74.36	1	1.36	38	1.63	31,491	3,126	2,801	147	168	5,391	14,362	7,181	7,181	240	24
		2	I-40 WB	MP 73 TO MP 74.36	1	1.36	40	1.56	33,149	3,126	2,949	147	177	5,824	14,362	7,181	7,181	240	24
TOTAL FOR PROJ NO. 39972.3.3						**2.72**		**3.19**	**64,640**	**6,252**	**5,750**	**294**	**345**	**11,215**	**28,724**	**14,362**	**14,362**	**480**	**48**
GRAND TOTAL						**2.72**		**3.19**	**64,640**	**6,252**	**5,750**	**294**	**345**	**11,215**	**28,724**	**14,362**	**14,362**	**480**	**48**

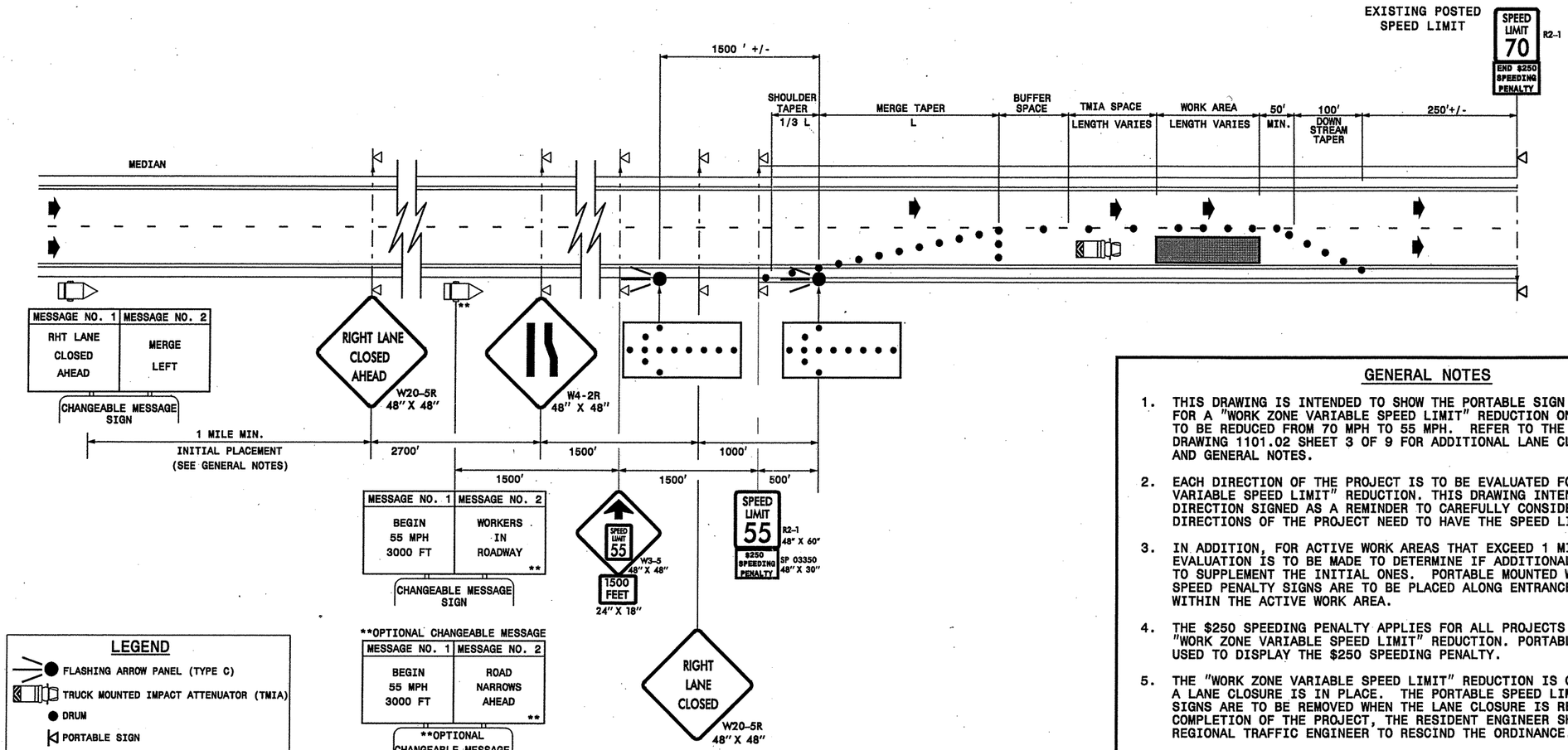
THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4415000000-E FLASHING ARROW PANELS, TYPE C EA	4420000000-N CHANGEABLE MESSAGE SIGN EA	4480000000-N TRUCK MTD. IMPACT ATTENUATOR (60 MPH) EA	4688000000-E 6"X 90 M WHITE THERMO LF	4688000000-E 6" X 90 M YELLOW THERMO LF	4690000000-E 6"X 120 M WHITE THERMO LF	4815000000-E 6" WHITE PAINT LF	4815000000-E 6" YELLOW PAINT LF	4905000000-N SNOW PLOWABLE MARKERS EA	4430000000-N DRUMS EA
39972.3.2	McDowell	1	I-40 EB	MP 73 TO MP 74.36	1	1	1	7,181	7,181	1,795	17,952	14,362	93	100
		2	I-40 WB	MP 73 TO MP 74.36	1	1		7,181	7,181	1,795	17,952	14,362	93	100
TOTAL FOR PROJ NO. 39972.3.3					**2**	**2**	**1**	**14,362**	**14,362**	**3,590**	**35,904**	**28,724**	**186**	**200**
								28,724			**64,628**			
GRAND TOTAL					**2**	**2**	**1**	**14,362**	**14,362**	**3,590**	**35,904**	**28,724**	**186**	**200**
								28,724			**64,628**			

ASPHALT MILLING SUMMARY

MILLING ASPHALT PAVEMENT 2-1/2"	38,300 SY
MILLING ASPHALT PAVEMENT 0" TO 2-1/2"	22,100 SY
MILLING ASPHALT PAVEMENT 2-1/2" TO 4"	1,100 SY
MILLING ASPHALT PAVEMENT 3"	270 SY
MILLING ASPHALT PAVEMENT 2-1/2" TO 3"	2,700 SY
MILLING ASPHALT PAVEMENT 0" TO 3"	170 SY
TOTAL	64,640 SY

PROJ. REFERENCE NO.	SHEET NO.
39972.3.3 (I-4908BA)	TCP-1



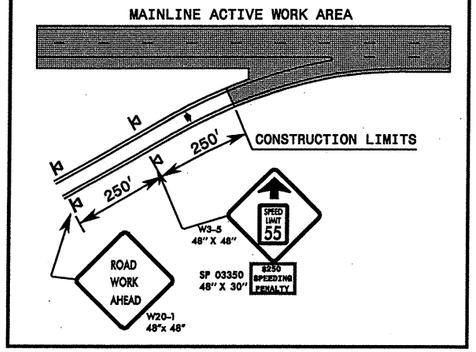
LEGEND

- FLASHING ARROW PANEL (TYPE C)
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- DRUM
- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW
- CHANGEBLE MESSAGE SIGN

GENERAL NOTES

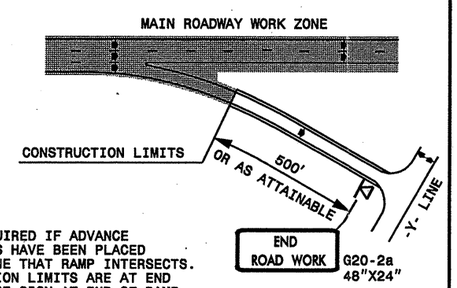
1. THIS DRAWING IS INTENDED TO SHOW THE PORTABLE SIGN LOCATIONS REQUIRED FOR A "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION ON A FREEWAY WHICH IS TO BE REDUCED FROM 70 MPH TO 55 MPH. REFER TO THE ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 9 FOR ADDITIONAL LANE CLOSURE REQUIREMENTS AND GENERAL NOTES.
2. EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION. THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED LIMIT REDUCED.
3. IN ADDITION, FOR ACTIVE WORK AREAS THAT EXCEED 1 MILE IN LENGTH, AN EVALUATION IS TO BE MADE TO DETERMINE IF ADDITIONAL SIGNS ARE NEEDED TO SUPPLEMENT THE INITIAL ONES. PORTABLE MOUNTED W3-5 SIGNS WITH SPEED PENALTY SIGNS ARE TO BE PLACED ALONG ENTRANCE RAMPS LOCATED WITHIN THE ACTIVE WORK AREA.
4. THE $250 SPEEDING PENALTY APPLIES FOR ALL PROJECTS THAT QUALIFY FOR A "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION. PORTABLE SIGNS ARE TO BE USED TO DISPLAY THE $250 SPEEDING PENALTY.
5. THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION IS ONLY IN EFFECT WHEN A LANE CLOSURE IS IN PLACE. THE PORTABLE SPEED LIMIT AND SPEED PENALTY SIGNS ARE TO BE REMOVED WHEN THE LANE CLOSURE IS REMOVED. AT THE COMPLETION OF THE PROJECT, THE RESIDENT ENGINEER SHALL NOTIFY THE REGIONAL TRAFFIC ENGINEER TO RESCIND THE ORDINANCE.
6. WHEN "WORK ZONE VARIABLE SPEED LIMIT" REDUCTIONS ARE IN EFFECT, THE CONTRACTOR IS TO COVER ANY EXISTING SPEED LIMIT SIGNS LOCATED WITHIN THE ACTIVE WORK AREA THAT CONFLICT WITH THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION.
7. DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
8. ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
9. SINGLE MOUNTED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.
10. THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION MUST BE ORDINANCED AND SIGNED BY THE STATE TRAFFIC ENGINEER BEFORE ANY SPEED LIMIT SIGNS ARE USED FOR REDUCING THE SPEED LIMIT.
11. **OPTIONAL CHANGEABLE MESSAGE MAY BE USED WHEN LANE CLOSURE IS IN EFFECT TO ALLOW FOR ASPHALT COURSE TO COOL DURING THE PATCHING OPERATION.

ENTRANCE RAMPS



DETAIL B

EXIT RAMPS



NOTE:
SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

APPROVED:_____ DATE:_____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030528 ENGINEER CHAD L. LANFORD

"WORK ZONE VARIABLE SPEED LIMIT" REDUCTION WITH PORTABLE SIGNS

SCALE:	NONE
DATE:	08-08
DWG. BY:	PS
DESIGN BY:	CL
REVIEWED BY:	CL

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

REVISIONS

CADD FILE

07-AUG-2008 13:50
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pseymore AT WZTC25T502